S/N: 09/935,675
NEC-F105/USA (IDE.006)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
In re Application of:

Toshiyuki TAMURA
Serial No.: 09/935,675

Group Art Unit: 2645

Filed: August 24, 2001

Examiner: Simon P. Sing

For: COMMUNICATION SYSTEM AND ALIGNMENT METHOD OF TRANSCODER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER RULE 37 C.F.R. § 1.131

Sir:

I, Toshiyuki Tamura, do hereby state that:

1) I am the inventor of the above-identified application.

2) The method and system for the communication system and alignment method of the transcoder of the present invention was known to me earlier than October 16, 2000, as shown in the NEC Document T-doc N4-000626 (Exhibit 1) presented at the 3GPP TSG-CN4 (TrFO workshop of August 28, 2000, in Seattle, Washington.

This document (Exhibit 1) is available online at: http://www.3gpp.org/ftp/tsg_cn/WG4_protocollars/tsgN4_04_Seattle/Docs/N4-00626.ZIP.

This document (Exhibit 1) was also submitted in the IDS submittal accompanying the original filing of the present Application in the USPTO on August 24, 2001. The effective publication date of the document (Exhibit 1) is August 25, 2000, which date is reflected on the email document (Exhibit 2) for the distribution of this document, and which date is earlier than October 16, 2000.

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The distribution email document (Exhibit 2) is available at: http://list.etsi.fr/scripts/wa.exe?A2=ind0008&L=3gpp_tsg_cn_wg4&T=0&F=&S=&P=9675.

3) The contents of the enclosed document (Exhibit 1) demonstrate the concept of the present invention, as described in the specification of the present invention, upon which new claims 20-39 are based. For example, the contents of Figure 5 "TBC function" in the document (Exhibit 1) can be found in Figure 6 of the present Application, and the contents of Figure 6 "RFCI alignment challenge" in the document (Exhibit 1) can be found in the combination of Figures 6 and 7 of the present Application.

4) The above clearly evidences a completion of the invention in a WTO country before the October 16, 2000, publication date of Siemens Tdoc N4-000868.

I hereby declare that all statements made here of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Further declarants sayeth not.

Date: 27 Dec. 2005

T. Tamura
Toshiyuki Tamura

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EXHIBIT 1
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3GPP TSG-CN4 (TrFO workshop)
Seattle, USA
28th August 2000

T-doc N4-000626

Title:	**SRNS relocation during the TrFO connection**
Source:	**NEC**
For:	**Discussion**
Agenda Item :	**Out-of-band transcoder control**

References: N4-000476(Siemens), N4-000av1(Siemens)

Basic working model

Ideally, there might be two models to treat SRNS relocation during the TrFO connection. The bearer negotiation is performed between each ends or the Iu UP is terminated once in the MSC where SRNS relocation occurs and perform relocation then seek a chance to reform TrFO connection. See the Figure 1 and Figure 2 for the working model and the table 1 shows a comparison between two ideas.

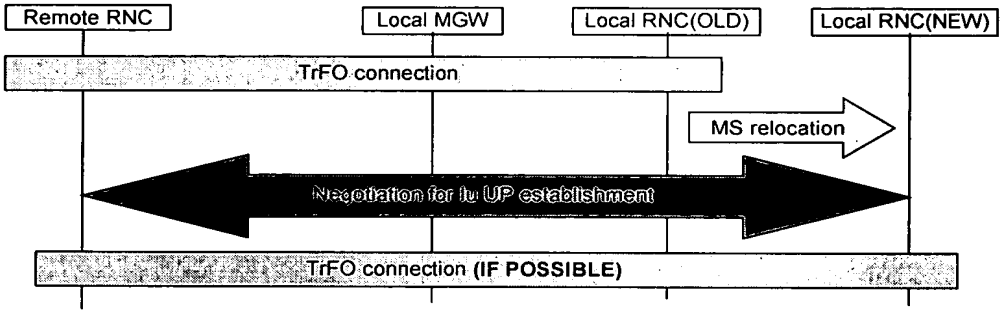

Fig.1 End to End negotiation

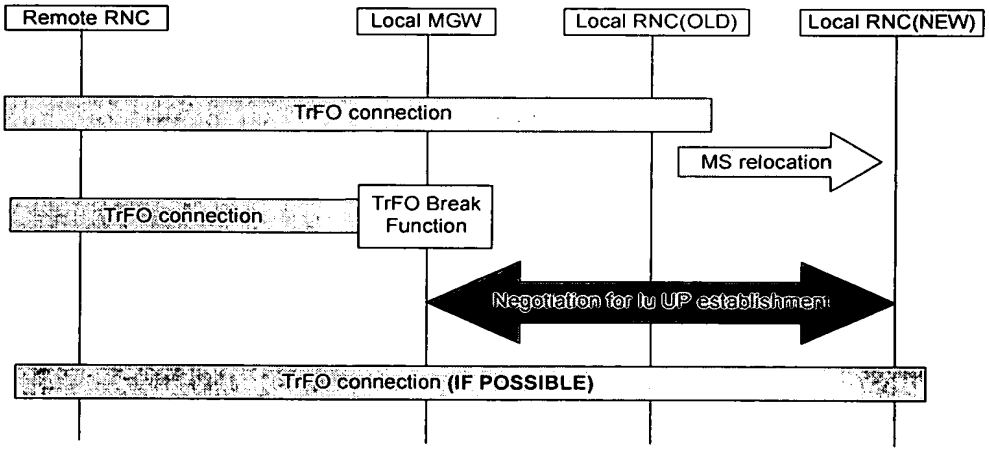

Fig.2 TrFO Break once anyway

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	End to end negotiation	TrFO break once anyway
Procedure	Relatively simple.	Relatively complex.
Clipping	Since Iu UP initialisation is executed between remote RNC and local RNC, Clipping could become perceptible.	No additional clipping to the expected clipping due to hard hand over.

Table 1: Comparisons

Based on the above comparisons, NEC believes that the TrFO break once anyway method has much advance than the other.

SRNS relocation during the TrFO connection (Focusing on the RFCI handling)

Basically, NEC sees that the N4-000476 that has presented by Siemens in the last TrFO/TFO workshop could be an appropriate as the basic concept of the TrFO call connection model. Thus, this paper is written based on the N4-000476 and identifies the necessary clarifications related to the RFCI handling.

1.RFCI handling in the CN in the call set-up procedure

The figure 3 depicts the RFCI recognition in the CN for the call set-up procedure. The Figure 3 is divided into three parts. The understanding of this picture might help to consider the RFCI handling for the SRNS relocation.

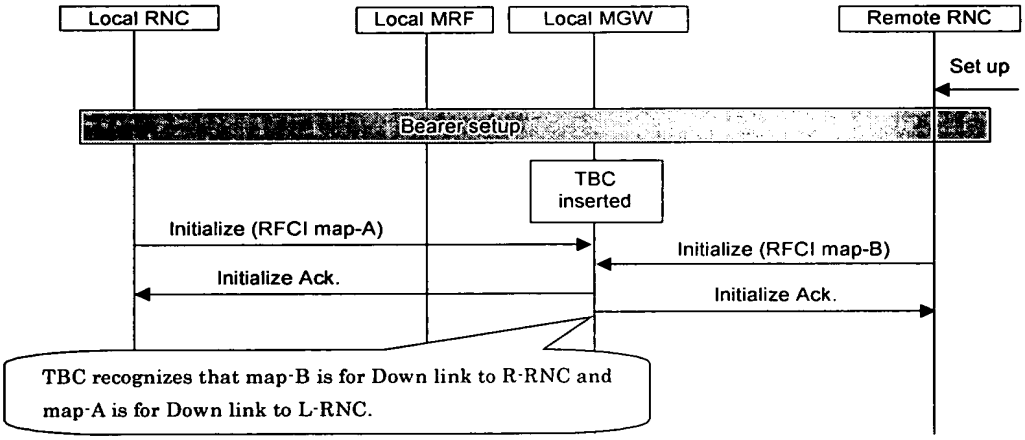

Fig.3-1 Initialization in both side (Step 1)

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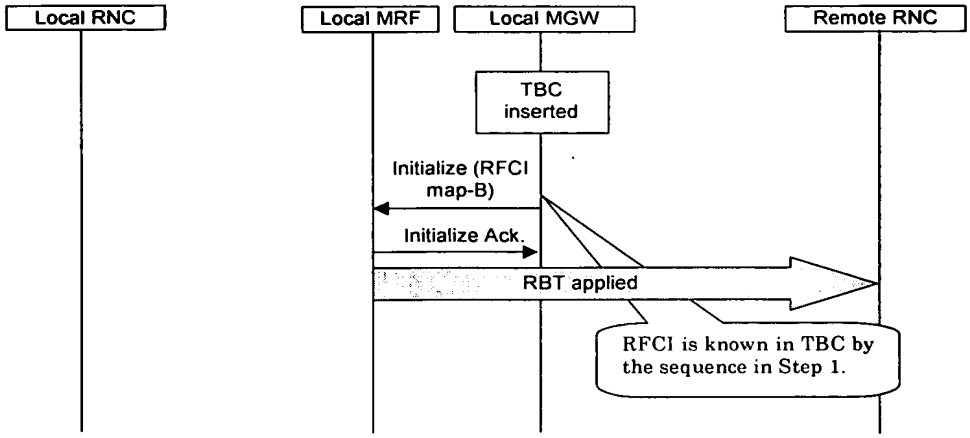

Fig.3-2 Connect to RBT (Step 2)

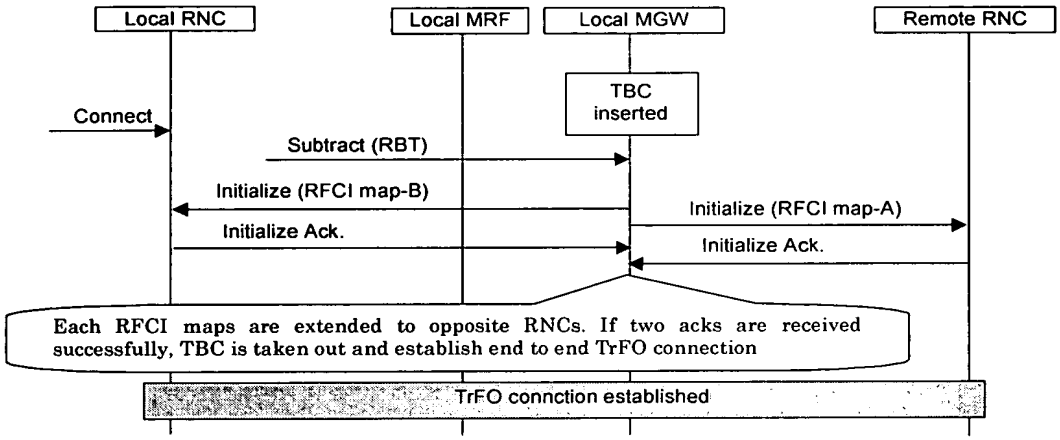

Fig.3-3 TrFO connection (Step 3)

In figure 3-3, it might be a problem in case that the initialise NACK is received instead of ACK in the local MGW. Since the called MS has answered in this particular phase of a call, it is not allowed to disconnect a call. The figure 3-4 illustrates the treatment for this situation. The local MGW could use RFCI information obtained by the same direction of the RNC to be initialised. In release 99, the reason why there is no initialisation procedure initiated by the core network is that the core network always uses the same RFCI set that is informed from the RNC. This idea can be utilised in this case. As the result, a call cannot be a TrFO connection. However, it can get rid of the worst scenario that is a call disconnection.

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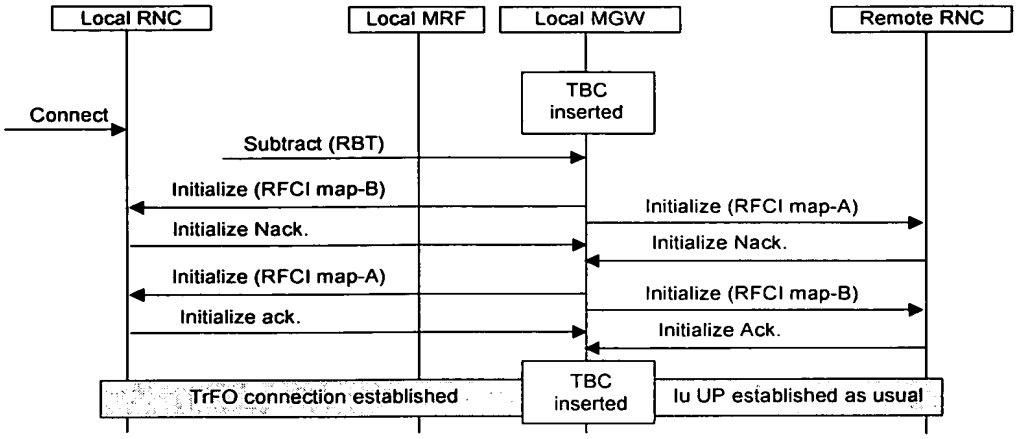

Fig.3-4 TrFO connection (Step 3-1)

2.RFCI handling in the CN in the SRNS relocation

This section considers the RFCI handling for the SRNS relocation based on the description in the previous section. The figure 4 illustrates the successfully SRNS relocation. The RFCI to be used for both Up link direction and Down link direction are exact same as the one used for the old RNC by chance.

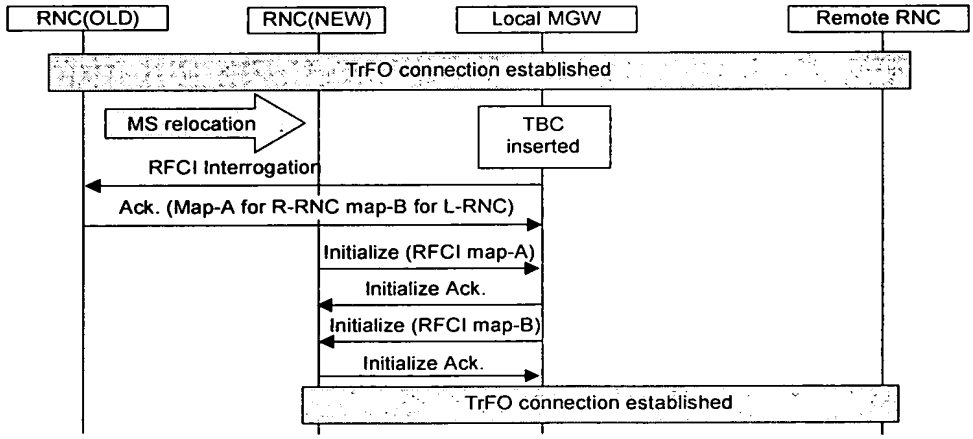

Fig.4 Successful SRNC relocation

In the next, The Figure 5 illustrates the case that the supported RFCI in the new RNC does not match as the one supported in the old RNC. This condition was made by the following actions:

- At first, TrFO connection was created by 1) Old local RNC requested to initialise with RFCI map-A and succeeded. 2) The remote RNC requested to initialise with RFCI map-B and succeeded.
- The SRNS relocation occurred. Then new local RNC requested to initialise with RFCI map-C and succeeded.
- The TBC requested to initialise new local RNC with RFCI map-C and succeeded.

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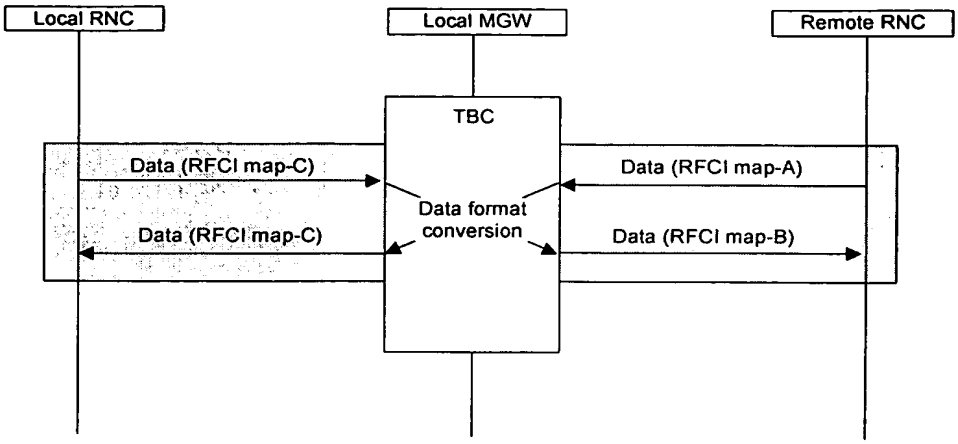

Fig.5 TBC function

In order to re-configure the TrFO connection, The CN(TBC) may try the following re-initialisation procedure. **(RFCI alignment challenge)**

The figure 6 illustrates the RFCI alignment challenge procedure. In the figure, the initialise procedure for the remote RNC is only successful so that the TBC only converts user data for the direction of remote RNC as the result.

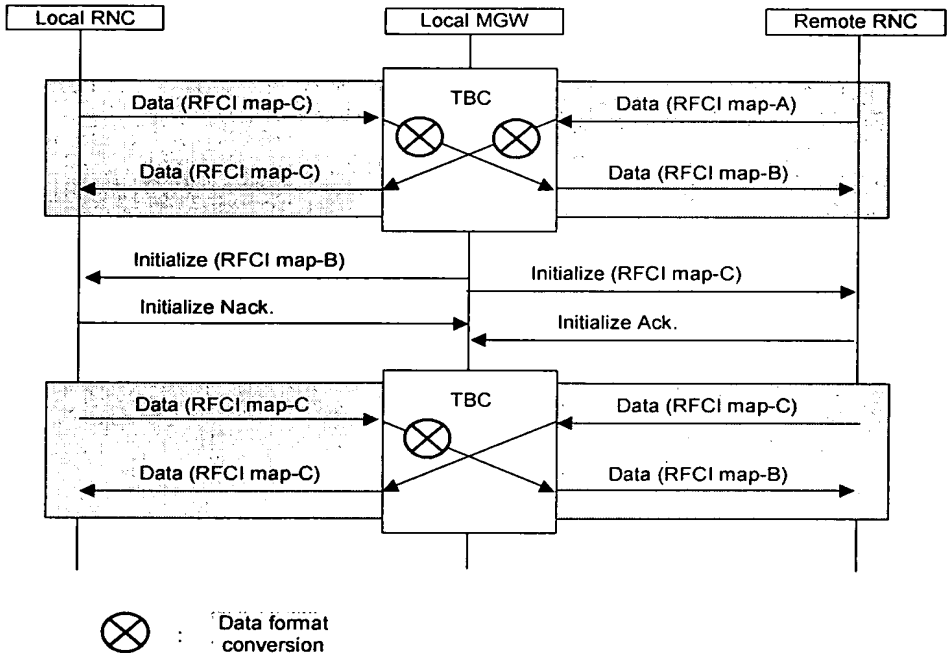

Fig.6 RFCI alignment challenge

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EXHIBIT 2

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Content-Type: multipart/mixed;

Dear TFO/TrFO fans,

Two contributions form NEC are attched.
See you in Seattle.

Best Regards,
NEC tamurato

Toshiyuki Tamura <NEC Corporation>
E-Mail : [log in to unmask] , [log in to unmask]
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